UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/646,194	09/14/2000	Hisashi Saiga	55051(1117)	5757

21874   7590   05/20/2004

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EXAMINER
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ART UNIT	PAPER NUMBER
2173	

DATE MAILED: 05/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.		**Applicant(s)**
Office Action Summary	09/646,194		SAIGA ET AL.
	Examiner		**Art Unit**
	Blaine Basom		2173

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>25 February 2004</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>28-55</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>28-55</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>14 September 2000</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All   b)☐ Some * c)☐ None of:

      1.☒ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

BA HUYNH
PRIMARY EXAMINER

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>17</u>.

4)☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Response to Arguments

In the previous Office Action, The Examiner rejected claims 28-47 as being anticipated

by the *Portable Document Format Reference Manual, Version 1.2.* A document formatted in the

Portable Document Format (hereafter a "PDF document") comprises a number of "page objects,"

whereby as described in the previous Office Action, each page object has information used to

display and manage a particular page of the document. Regarding this analysis, the Applicants

submit that at least part of the display information and associated scroll information for each

page depends upon information created and saved in other portions of the document, not just in

its associated page object. The Applicants thus conclude that a page object does not constitute a

"pre-specified unit" like recited in the claimed invention. The Examiner respectfully disagrees

with this conclusion. While it is true that the display and control of a PDF page may depend

upon information outside of its associated page object, the Examiner maintains that, given the

broadest, most reasonable meaning of a pre-specified unit, a PDF page object in fact constitutes

such a pre-specified unit. The Applicants appear to associate a pre-specified unit with having *all*

of the necessary display information and scroll display control information required to display

and manage a pre-specified unit of display data. The Examiner notes, however, that the claims

of the present application express no such association. The claims simply express that a pre-

specified unit includes display information and scroll display control information, wherein the

scroll display control information specifies the scroll path of the display of the display

information along which scrolling is to be conducted as line segments having different directions

in a coordinate system defined by the pre-specified unit according to coordinate values assigned

to the display information in the pre-specified unit. Additionally, since a pre-specified unit is not

an industry-standard term, there is no intrinsic requirement for having *all* of the necessary

display information and scroll display control information required to display and manage a pre-

specified unit of display data. Thus a portion of display data may be considered a pre-specified

unit if the portion comprises display information and scroll display control information as

defined above, and may still be considered a pre-specified unit even if the portion does not have

all the necessary display information and scroll display control information for displaying and

managing the display unit. As shown in the previous Office Action, and again below, the page

object described by the *Portable Document Format Reference Manual* comprises both display

information and scroll display control information, and is thus considered a pre-specified unit.

Further regarding the claimed invention, the Applicants submit that the claims have been

amended such that the recited "intervals" refer to portions of the scroll path itself, rather than the

actual rectangle surrounding a portion of the scroll path, i.e. the "R" parameter of the PDF

Reference Manual, which was used by Examiner in the previous Office Action to reject various

claims of the present application. In response, the Examiner presents the U.S. Patent of Warnock

(U.S. Patent No. 5,634,064), which as shown below may be combined with the teachings of the

PDF Reference Manual to read on such claims.

The Applicant's arguments have thus been considered, but are moot in view of the

following new grounds of rejection.

Specification

The abstract of the disclosure is objected to because it does not describe the invention as claimed. For example, the abstract does not express anything about scroll display control information, which is a major feature of the claimed invention. Correction is required. See MPEP § 608.01(b).

Double Patenting

Applicant is advised that should claim 51 be found allowable, claim 52 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Claim Objections

Claim 52 is objected to because it is not in sentence form, and more specifically, because it does not end with a period (.). Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 28-29, 31, 33-39, 41, and 43-47 are rejected under 35 U.S.C. 102(b) as being

anticipated by the "Portable Document Format Reference Manual, Version 1.2," which is

attributed to Bienz et al. (and hereafter referred to as "Bienz"). In general, Bienz describes the

Portable Document Format (PDF), a file format used to specify electronic documents such that

the documents are easily and reliably exchanged and viewed (see section 2.1, on page 27). As

these PDF documents are stored as files (see section 2.3.2, on page 30), which are interpreted to

be maintained in computer memory, such a computer memory is considered a data storage

medium with display data recorded thereon.

Specifically regarding claims 28-29 and 38-39, Bienz discloses that a PDF document is

implemented by a hierarchy of objects included within a PDF file (see section 6.1 on page 71).

In particular, each page of the document is realized by a corresponding "Page object," the Page

object being efficiently accessed through a "Pages tree" structure (see section 6.3, beginning on

page 75). Each Page object describes the content and functionality of a single document page

(see section 6.4, beginning on page 77). Consequently, the display data of the PDF document is

understood to be recorded in the form of pre-specified units, specifically Page objects. Bienz

particularly discloses that each Page object comprises a "Contents" parameter, which references

the page description of its corresponding document page (see section 6.4, on page 78). Because

this page description specifies the text, graphics, and images of the page (see chapter 8, page

209), the Contents parameter and its associated page description are consequently considered

"display information," like that recited in the present application. Specifically regarding claim

38, it is interpreted that this page description may comprise image data objects and associated

management information for these objects (for example, section 8.1 beginning on page 209).

Bienz further discloses that each Page object also comprises a "B" parameter, which references

the "article beads" on the page (see section 6.4 on page 78). An article bead is associated with a

distinct section of an article, whereby a plurality of such beads may be linked into a common

"thread," so that a user may read an entire article by scrolling from one article bead to the next,

rather than from one page to the next (see section 6.12, beginning on page 111). In particular,

each bead includes an "R" parameter, which identifies the page location on which its associated

article section appears (see Table 6.44 on page 112). It is understood that this page location is

specified in a coordinate system according to the coordinate values assigned to its associated

article section. For instance, the R parameter is denoted by 4 values, wherein these 4 values

identify the coordinates of the corners of the rectangle surrounding the associated article section

(see section 7.1 on page 133). Each article bead is thus specified by a rectangle, or in other

words, by two sets of line segments having different directions in a coordinate system - two

parallel line segments extending in a first direction, and two parallel line segments extending in a

second, transverse direction. Additionally, each bead includes a "T" parameter, a "V" parameter,

and an "N" parameter, which respectively identify the thread on which the bead belongs, the

previous bead in the thread, and the next bead in the thread (see Table 6.44 on page 112). The

beads are thus linked into a common thread such that a user may scroll from bead to bead, i.e.

article section to article section, in order to read an entire article. It is interpreted that in doing

so, the above-described T, V, and N parameters are used to move from one bead to the next,

whereby for each bead, the above-described R parameters reference the bead's associated article

section, which is displayed at an appropriate zoom level (for example, see section 6.12 on page

111). The beads referenced by the B parameter therefore specify a scroll path through the

document, and more particularly, a scroll path through the page of the document. Consequently,

the B parameter and its associated article beads are considered "scroll display control

information," like that recited in the present application. Thus, Bienz presents a PDF file

wherein document display data is recorded in the form of pre-specified units, specifically Page

objects, and wherein each Page object includes display information identified by a Contents

parameter, and scroll display information identified by a B parameter, the scroll display

information specifying the display path of the display information as line segments having

different directions in a coordinate system defined by the page, and according to coordinate

values assigned to the display information in the page.

Regarding claims 31 and 41, the B parameter of Bienz, and its referenced article beads,

are considered "scroll display control information," as is described above in the paragraph

regarding claims 28 and 29. Moreover, each bead comprises a V parameter and an N parameter,

which as described above, are for linking with the previous and next beads, respectively, of the

thread in which the bead belongs (see Table 6.44 on page 112). As an article may have sections

scattered throughout the various pages of a document, it is understood that such a previous or

next bead, which defines such article sections, may be on a different document page.

Consequently, Bienz teaches that the scroll display control information, i.e. article beads, may include information for linking with the beads on another document page, or in other words, may include information for linking with scroll display control information of another pre-specified unit.

Referring to claims 33 and 43, the B parameter of Bienz, and its referenced article beads, are considered "scroll display control information," as is described above in the paragraph regarding claims 28 and 29. As further shown above, each bead includes a R parameter, which delineates a specific article section by means of four coordinate values, these coordinate values defining a rectangle. The beads are linked into a common thread so that a user may scroll from bead to bead in order to read an entire article, whereby for each bead, the content bounded by this rectangle is displayed at an appropriate zoom level (for example, see section 6.12 on page 111). Thus the scroll display control information taught by Bienz includes information, particularly this R parameter, which specifies display information, namely article sections, which as described above are associated with selected areas of the coordinate system defined by each page. By the same reasoning, this R parameter is understood to specify a scroll display area on the display screen.

As per claims 34 and 44 the B parameter of Bienz, and its referenced article beads, are considered "scroll display control information," as is described above in the paragraph regarding claims 28 and 29. Each bead includes an R parameter, which as shown above, delineates specific document content by means of four coordinate values, these coordinate values defining a rectangle about the content. The beads are linked into a common thread so that a user may scroll from bead to bead in order to read an entire article, whereby for each bead, the content bounded

by this rectangle is displayed at an appropriate zoom level (for example, see section 6.12 on page

111). Consequently, it is understood that the size of such a rectangle affects the amount of zoom

for the document content referenced by the bead; for example, if the rectangle is the size of an

entire page, the document content may not be zoomed much, whereas if the rectangle is much

smaller, the document content may be enlarged more significantly. Thus the scroll display

control information taught by Bienz includes information, specifically the rectangle identified by

the R parameter, which intrinsically specifies a scale of enlargement or reduction of a display

area for scroll display.

As per claims 35 and 45, the B parameter of Bienz, and its referenced article beads, are

considered "scroll display control information," as is described above in the paragraph regarding

claims 28 and 29. Such an article bead includes a R parameter, which as shown above,

references specific document content by means of four coordinate values, these coordinate

values defining a rectangle about the document content. Regarding the claimed invention, Bienz

discloses that PDF documents may include movies and sounds (see section 1.3 on page 20). It is

therefore understood that the document content referenced by the above-described R parameter

may comprise movies and/or sounds. Consequently, the scroll display control information taught

by Bienz includes synchronous reproduction information, namely the R parameter, which

specifies data content to be reproduced in synchronism with the scroll display, and wherein this

data content may comprise non-motionless data such as sound and/or moving images.

In reference to claims 36-37 and 46-47, Bienz discloses that a computer is used for

reproducing and displaying a PDF document (for example, see section 2.2 on page 28). As

described above, such a PDF document is stored in a storage medium and is scrolled based on

the above-described scroll display control information. Such a computer presenting the PDF

document described by Bienz is therefore considered a "display device," like that recited in

claims 36 and 46. Specifically regarding claim 37, it is understood that this computer comprises

a processing unit, as known in the art, whereby this processing unit ultimately implements and

controls the scroll display of the image on the computer's display screen. Consequently, such a

processing unit is considered a "scroll indicating means," like that recited in claims 37 and 47.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 30, 40, and 48-55 are rejected under 35 U.S.C. 103(a) as being unpatentable over

the Portable Document Format Reference Manual, which is described above, and also over U.S.

Patent No. 5,634,064, which is attributed to Warnock et al. (and hereafter referred to as

"Warnock"). As described above, a PDF page object comprises information used to display and

control a particular page of a document, and specifically comprises scroll information specifying

a plurality of intervals, referred to as "beads," for the particular page. Each bead is associated

with a distinct section of an article, whereby as described above, the location of the bead on the

page is identified by an "R" parameter which defines line segments having different directions in

a coordinate system associated with the page object, the line segments composing a rectangle

surrounding the article section associated with the bead. A plurality of such beads may be linked

into a common "thread," so that a user may read an entire article by scrolling from one article

bead to the next, rather than from one page to the next (see section 6.12, beginning on page 111).

Each bead is thus a component of a scroll path. However, the Portable Document Format

Reference Manual does not explicitly disclose that a scroll path may be defined on a single

document page, such that a user may scroll from one bead on the page, to a second bead on the

same page. In other words, the Manual does not explicitly disclose that the set of beads specified

by a single page object *together* form a scroll path, as is expressed in claims 30 and 40.

Like the PDF format described above, Warnock discusses documents which may

comprise one or more articles, each article having sections on different pages of the document,

whereby a thread may be created so that a user may read an entire article by scrolling from one

article section to the next, rather than from one page to the next (see column 2, line 30 – column

3, line 31). Regarding the claimed invention, Warnock teaches that a single page of a PDF

document may have more than one article section of the same article, such that a user can display

a single article section of the page at a time, and scroll from one article section to the next (for

example, see column 5, line 46 – column 7, line 31). When displayed, each article section is

automatically zoomed to fit within the display window, yet may still require scrolling if the

length of the article section, for example, does not fit within the window (see column 10, line 56-

column 11, line 36). Particularly, each article section is displayed at either the beginning of the

section and scrolled toward the end of the section, or displayed at the end of the section and

scrolled toward the beginning (see column 11, line 31 – column 12, line 9). Each article section

is thus implicitly associated with two vectors which further specify the scroll path through an article, one vector starting at the beginning of the section and ending at the end, the other vector starting at the end of the section, and ending at the beginning of the section.

It would have been obvious to one of ordinary skill in the art, having the teachings of the Portable Document Format Reference Manual and Warnock before him at the time the invention was made, to modify the PDF format taught by Portable Document Format Reference Manual, such that multiple article beads may be linked on the same page, as is done by Warnock. It would have been advantageous to one of ordinary skill to utilize such a combination because the ability to navigate between particular sections of an article located within the same page is beneficial in certain document layouts, such as columnar layouts, as is demonstrated by Warnock.

With respect to claims 48, 49, 50, 51, 52, and 53, Warnock teaches that the scroll path though each bead is inherently conducted along one of two vectors, one vector starting at the beginning of the bead and ending at the end, the other vector starting at the end of the bead, and ending at the beginning, as is described above. As further described above, the PDF format comprises an "R" parameter associated with each bead, the "R" parameter defining a rectangle as 4 coordinate values in a coordinate system defined by the page object within which the bead is located. This rectangle, surrounding the article section, identifies the beginning and end of the section, and therefore defines the vectors by which the scroll paths through the section are defined. It is consequently understood that the with the above-described combination of the PDF Reference Manual and Warnock, the scroll display control information, specifically the "R" parameter for each bead, specifies the scroll path of the display of the display information as

vectors identified by coordinate values of the pages in a coordinate system defined by the display

data according to coordinate values assigned to the article sections in each page. As an article

may span a plurality of pages, a sequential display of the pages is conducted along these vectors.

In reference to claims 54 and 55, Warnock discloses that each article bead may be

associated with a zoom level, the zoom level being based on the width of the article section (see

column 11, lines 4-30). As described above, the PDF format comprises an "R" parameter

associated with each bead, the "R" parameter defining a rectangle surrounding the article section

associated with the bead. This rectangle, since it surrounds the article section, defines the width

of the section. It is consequently understood that the with the above-described combination of

the PDF Reference Manual and Warnock, the scroll display control information, specifically the

"R" parameter for each bead, defines an appropriate zoom level for the bead, and is thus

considered a scale of enlargement or reduction of a display area for scroll display on the screen

of a display device.

Claims 32 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over the

above-described PDF documents taught by Bienz, and also over Japanese Patent No. 5-323941,

which is attributed to Michihiro Ota (and hereafter referred to as "Ota"). As described above,

Bienz discloses a data storage medium with display data recorded thereon, wherein like recited

in each of claims 28 and 38, the display data is provided with information for scroll display on a

display screen. This information for scroll display comprises a B parameter and its referenced

beads, as is described above. A plurality of such beads are linked into a common thread, so that

a user may read an entire article by scrolling from one article bead to the next, rather than from

one page to the next (see section 6.12, beginning on page 111). Bienz however does not

explicitly disclose that this information for scroll display includes information specifying a scroll

display speed, as is expressed in each of claims 32 and 42.

Like Bienz, Ota discloses a method for presenting a document on a display screen,

whereby the document can be scrolled. Regarding the claimed invention, Ota teaches that the

scroll speed may be varied according to the number of characters displayed (see the abstract of

Ota). Consequently it is understood that the document described by Ota is associated with

information for scroll display, wherein this information for scroll display includes information on

a scroll display speed.

It would have therefore been obvious to one of ordinary skill in the art, having the

teachings of Bienz and Ota before him at the time the invention was made, to modify the

information for scroll display taught by Bienz, such that the articles may be scrolled at a rate

proportional to the number of characters displayed, as is taught by Ota. It would have been

advantageous to one of ordinary skill to utilize such a combination because the resulting

document scrolling speed would match the document reading speed of a user, as is taught by Ota

(see the abstract of Ota). This is a desirable attribute for a document displaying system. Thus

with this combination of Bienz and Ota, the beads of an article thread are each scrolled at a rate

proportional to the number of characters displayed in the article section associated with each

bead. In other words, the content of the article section implicitly specifies the scroll display

speed of that section. The content of such article section is determined by the P and R

parameters of the bead associated with that article section, as is described above in the rejection

for claims 28-29 and 38-39. Thus the P and R parameters of each bead specifies the content of

an article section, which in turn includes information (namely the characters displayed in that article section) that determines the scroll display speed, and therefore, the P and R parameters are understood to inherently include information specifying the scroll display speed. Consequently with this combination of Bienz and Ota, the scroll display control information includes information specifying a scroll display speed.
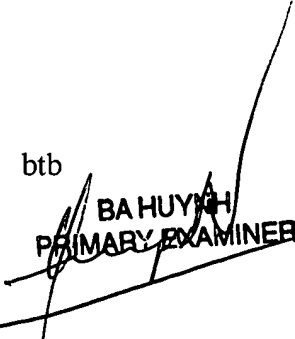
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Blaine Basom whose telephone number is (703) 305-7694. The examiner can normally be reached on Monday through Friday, from 8:30 am to 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Cabeca can be reached on (703) 308-3116. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

btb

BA HUYNH
PRIMARY EXAMINER